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hooker

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November 16, 1981

cc SWB
A
file

NYD000831644

EPA Region II
Room 1009
26 Federal Plaza
New York, New York 10007

Subject: Groundwater Monitoring Program
Hyde Park Landfill
Niagara Falls, New York
EPA ID# NYD000824484

Dear Sirs:

Hooker Chemicals & Plastics Corp. has been granted an interim status permit for the Niagara Plant which includes the operation of a surface impoundment at our Hyde Park landfill. Pursuant to 40 C.F.R. Part 265, Subpart F., a groundwater monitoring program or applicable waivers for this site must be in place by November 19, 1981.

This site is the subject of complaints filed by the United States of America and the State of New York in the U.S. District Court for the Western District of New York (Civil Action No. 79-989) against Hooker Chemicals & Plastics Corp., et al. A Settlement Agreement encompassing a comprehensive program for closing, containing and monitoring this site was reached by the parties on January 19, 1981 and submitted to the court. This Settlement Agreement is currently under review by the court, and will hopefully be approved by the court in the near future. A copy of this Settlement Agreement is enclosed for reference.

A study of this site by Hooker's Consultant, Conestoga-Rovers & Associates Limited, indicates that there is a very low potential for migration of wastes from the site via the uppermost aquifer to water supply wells or to surface water. This low potential for migration is demonstrated in the enclosed report prepared by Conestoga-Rovers.

Based on this demonstration, it is requested that the monitoring requirements of Part 265, Subpart F. be waived.

Very truly yours,

HOOKER CHEMICALS
& PLASTICS CORP.

John R. Nichter

John R. Nichter
Operations Manager
Special Environmental Programs

PERMITS ADMIN. BRANCH
REGION II
NOV 19 3 21 PM '81
ENVIRONMENTAL PROTECTION AGENCY
NEW YORK, N.Y. 10007

bmh
Enc.

HYDE PARK LAGOONS - EPA ID#NYD000824484

PART 265-INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES -

SUBPART F - GROUND WATER MONITORING - § 265.90

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1.0 INTRODUCTION

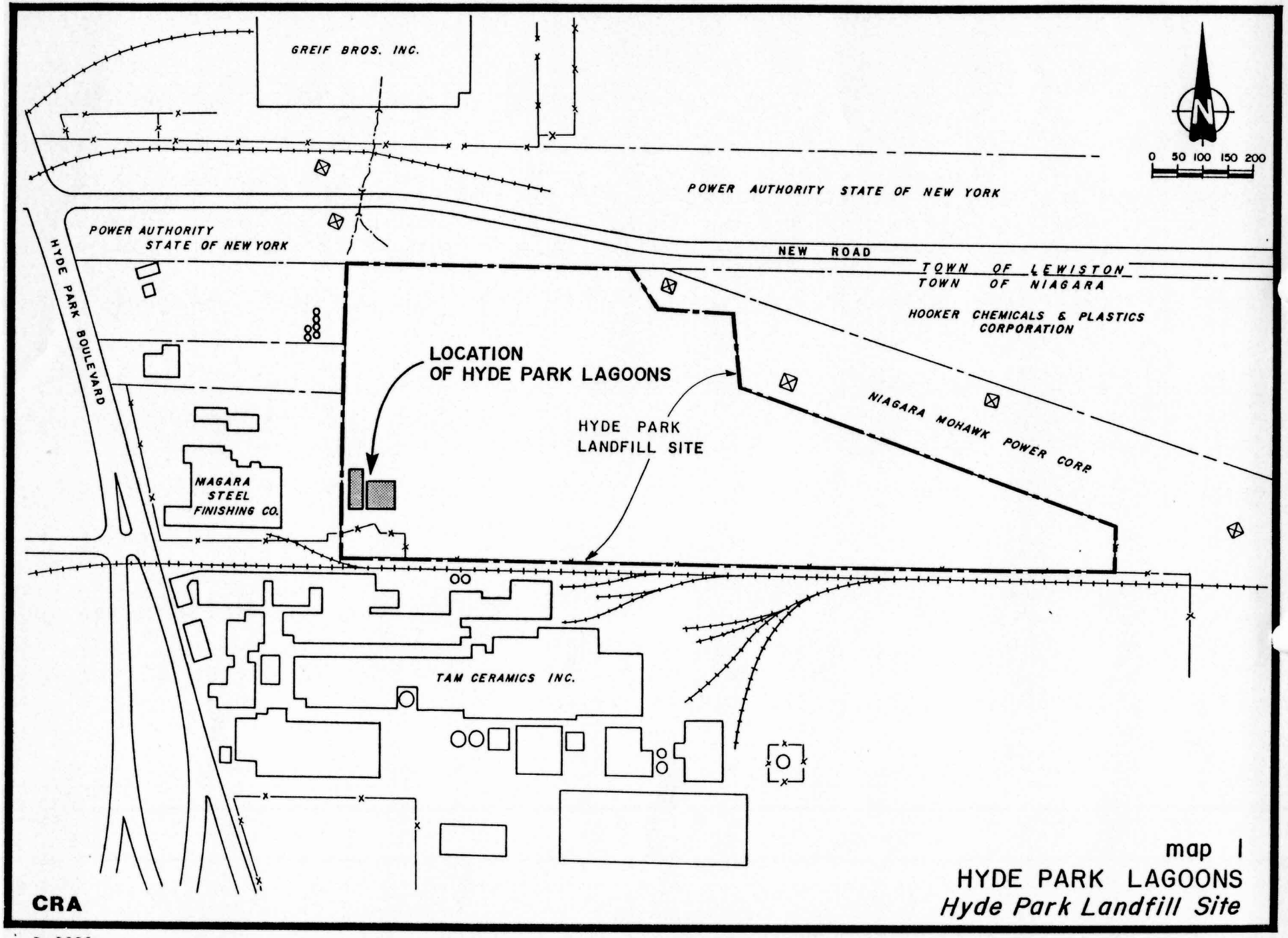
1.1 PURPOSE OF REPORT

The purpose of this report is to demonstrate that the groundwater monitoring requirements for the Hyde Park lagoons as required by SubPart F - Ground Water Monitoring - §265.90 should be waived in accordance with §265.90 (c).

1.2 BACKGROUND

The Hyde Park Landfill Site shown on Map 1 is located in an industrial complex in the extreme northwest corner of the Town of Niagara, New York. It is bounded on the north by the boundary line between the Towns of Niagara and Lewiston, on the east by undeveloped property, on the south by property and facilities owned by TAM Ceramics Inc., and on the west by property and facilities owned by Niagara Steel Finishing Co., Home Oil Co., and a monument works owned by the Paonessa family.

In 1974 a lagoon to temporarily store collected leachate from the landfill site was constructed in the southwest corner of the site. The lagoon was a clay lined facility.


GREIF BROS. INC.
POWER AUTHORITY STATE OF NEW YORK
POWER AUTHORITY
STATE OF NEW YORK
NEW ROAD
TOWN OF LEWISTON
TOWN OF NIAGARA
HOOKER CHEMICALS & PLASTICS CORPORATION
HYDE PARK BOULEVARD
LOCATION
OF HYDE PARK LAGOONS
HYDE PARK
LANDFILL SITE
NIAGARA MOHAWK POWER CORP.
MAGARA
STEEL
FINISHING CO.
TAM CERAMICS INC.
N
0 50 100 150 200
CRA
map 1
HYDE PARK LAGOONS
Hyde Park Landfill Site

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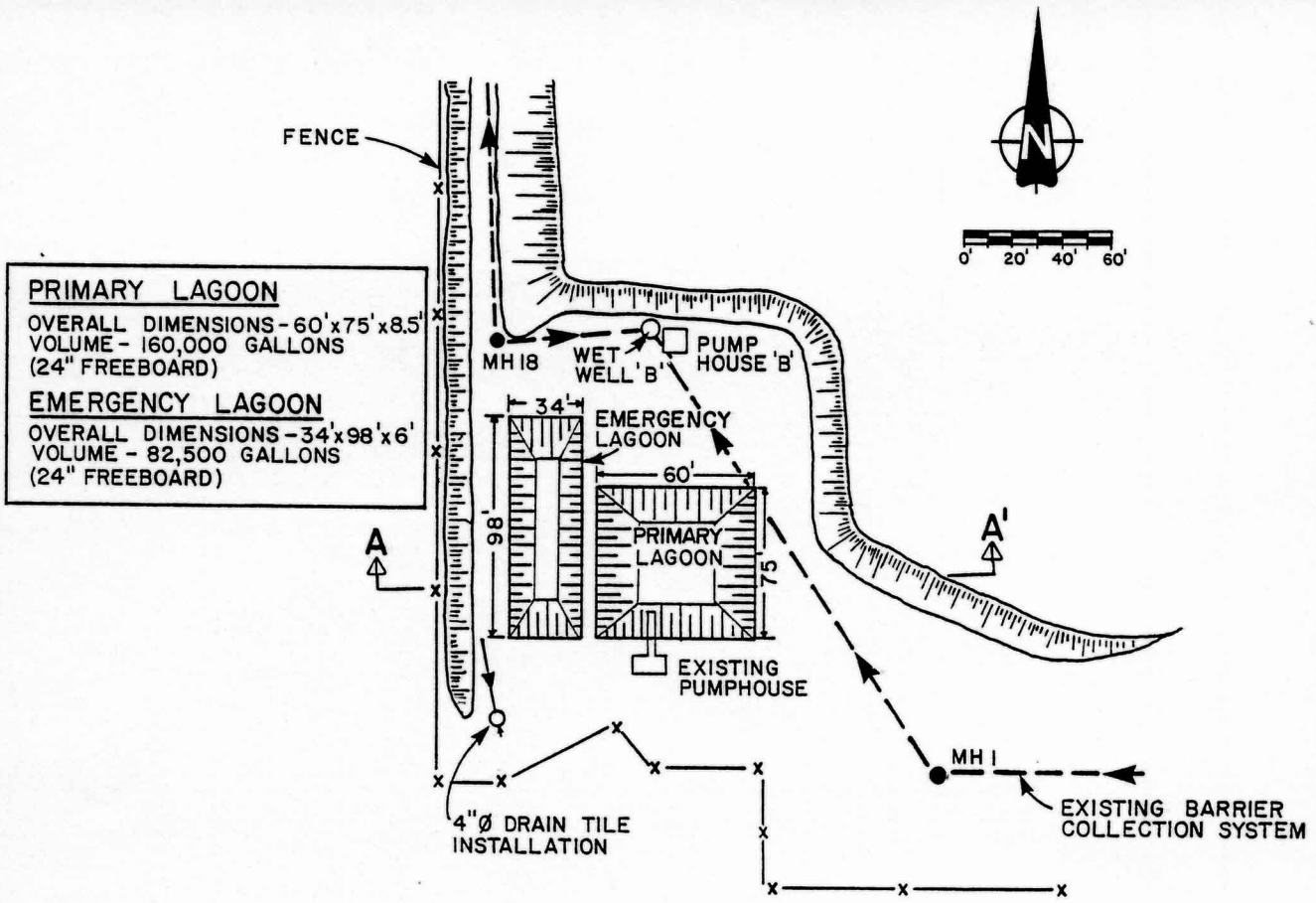
In 1978 and 1979 the lagoon was reconstructed. During this reconstruction the following steps were taken:

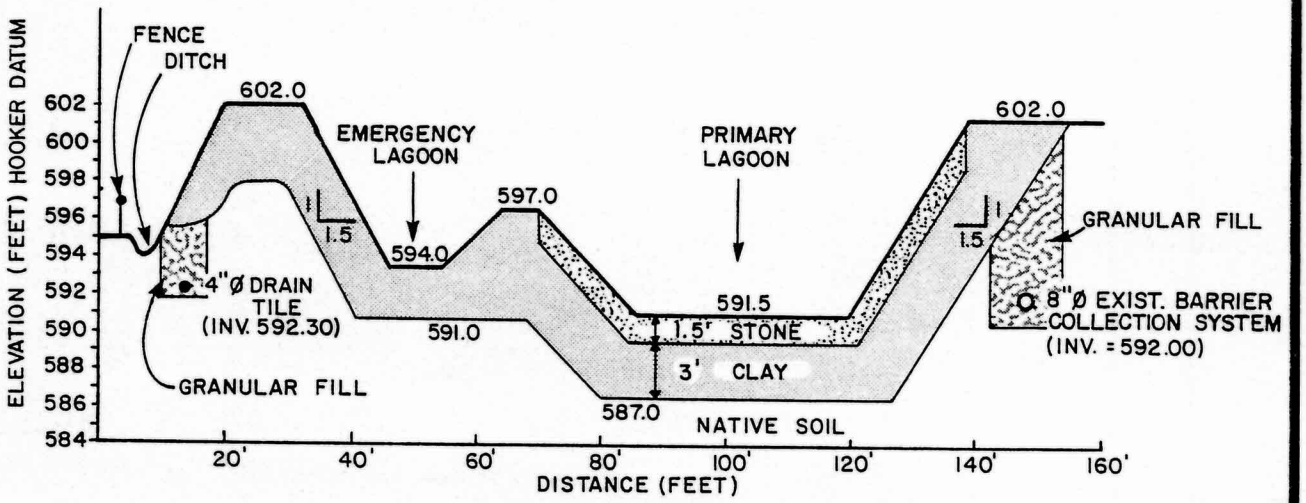
1) The existing lagoon constructed in 1974 was emptied.
2) This existing lagoon was reconstructed to consist of a primary and an emergency lagoon.
3) The reconstructed lagoons were lined with 3 feet of clay having a permeability equal to or less than 1×10^{-7} cm per second.
4) The primary lagoon bottom and sides were lined with rip rap to protect against erosion.

Figure 1 shows in plan view and cross section view the reconstructed lagoons at the Hyde Park Landfill Site.

In January 1980 Hooker commenced negotiations with the United states Department of Justice (DOJ) the United States Environmental Protection Agency (EPA) and subsequently New York State including the Department of Environmental Conservation (DEC) and Health (DOH) for the closure of the Hyde Park Landfill Site. This included closure plans for the existing lagoons at the landfill site.



PLAN VIEW



CROSS SECTION A – A'

figure 1

CRA

RECONSTRUCTED LAGOONS HYDE PARK

9-0608

On January 19th, 1981 the United States, New York State, and Hooker presented a Settlement Agreement signed by all parties including the Town of Niagara and Lewiston to the United States District Judge.

2.0 DEMONSTRATION FOR WAIVER

There is a low potential for migration of hazardous waste or hazardous waste constituents from the Hyde Park Landfill lagoons via the uppermost aquifer to water supply wells (domestic, industrial or agricultural) or to surface water for the following reasons:

1) The lagoons are used for the temporary storage of collected leachate from the Hyde Park Landfill Site. From the lagoons the aqueous phase of the stored leachate is pumped and taken to off-site activated carbon facilities for treatment.
2) The lagoons are bermed and covered with a PVC liner. As a result, precipitation, evapotranspiration, runoff and infiltration into and from the lagoons is effectively zero. The water balance around the lagoons consists of leachate input from the collection tiles and leachate output for treatment.
3) An exhaustive hydrogeologic study conducted during the period 1978 to 1980 of the overburden and upper bedrock around the lagoons has defined the following:

    a) The bedrock surface consisting of Lockport dolomite lies beneath the lagoon base at a depth of approximately 12.5 feet.

b) The overburden materials beneath the lagoons consist of a clay matrix soil which has a vertical permeability of about 1×10^{-7} cm per second.

c) The groundwater surface in the overburden in the vicinity of the lagoons is at an approximate elevation of 592.0 feet AMSL. This elevation is equivalent to the base of the primary lagoon as shown on Figure 1.

d) The horizontal direction of groundwater flow in the overburden outside the site is westward. The groundwater inside the site and beneath the lagoons flows to the leachate collection tile. The vertical gradient of flow is downward to the Lockport bedrock aquifer. The groundwater flow direction in the Lockport bedrock aquifer is westward toward the Niagara River.

e) No private water supply wells are known to exist in the direction of groundwater flow from the lagoons.

f) In the direction of groundwater flow the nearest surface water is the Niagara River located approximately 2,500 feet west of the lagoons.

4) Since the reconstruction of the lagoons in 1979 there has been no evidence of migration through the lagoon liner of collected leachate. In 1979 the lagoons were relined with clay having a maximum permeability of 1 x 10^{-7} cm per second. Assuming a unit gradient across the clay liner and into the clay matrix soils it can be calculated that the extent of leachate migration into the clean clay liner has been limited approximately 0.5 feet. This assumes that saturated flow conditions are prevailing throughout the clay liner which was placed at a moisture content significantly less than saturation. Making the calculation under unsaturated flow conditions would show that the extent of migration into the liner is substantially less than 0.5 feet.

5) Leachate collection tile have been installed around the eastern, northern and southwestern perimeter of the lagoons. Should seepage occur through the base of the primary lagoon in the future the leachate collection tile installed around the northern and eastern perimeter will collect the seepage. Should seepage occur from the emergency lagoon the leachate collection tile installed around the northern perimeter and southwest corner of the lagoon will collect the seepage. Data evaluation suggests that such seepage has not occured to date and is very unlikely to occur prior to closure of the lagoons.

6) The Settlement Agreement signed by the United States, New York State, Hooker and the Town of Niagara and Lewiston and submitted to the United States District Judge on January 19th, 1981 require monitoring of the lagoons commencing one year after the implementation of the Settlement Agreement in the event the lagoons have not already been closed.

7) Pursuant to the Settlement Agreement, Hooker plans construction of above ground storage tanks and closure of these lagoons as expeditiously as possible.

3.0 CONCLUSION

It is concluded that the groundwater monitoring requirements for the Hyde Park Landfill lagoons should be waived because the continued use and monitoring of the lagoons is addressed in the Hyde Hooker Park Settlement Agreement. As such the lagoons will shortly be replaced with other facilities and in the intervening period can perform adequately. The low potential for migration of hazardous waste constituents from the lagoons is further controlled by the leachate collection systems installed around the lagoons.

The undersigned are professional engineers and hydrogeologists and, since 1978, have served as consultants to Hooker with regard to the Hyde Park Landfill.

All of which is respectfully submitted

CONESTOGA-ROVERS & ASSOCIATES LIMITED

Frank A. Rovers, P. Eng.